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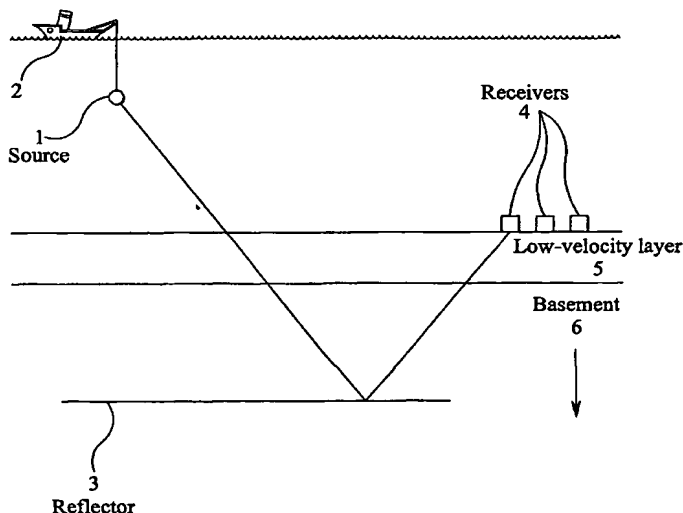
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(54) Title: **A METHOD OF AND APPARATUS FOR PROCESSING SEISMIC DATA**



(57) Abstract: A method of processing seismic data that includes including first and second modes of seismic energy where the second mode has been generated by partial mode conversion of the first mode at a boundary face of a layer of the seabed includes the step of cross-correlating a trace acquired at a receiver and including events corresponding to the first mode with a trace acquired at the same receiver and including events corresponding to the second mode. An event in the cross-correlated data that corresponds to partial mode conversion is identified, and the amplitude of this event is normalised, for example relative to the amplitude of the peak in the cross-correlogram at zero time delay. Information about the effects of the static shift produced by the layer and/or about vector infidelity can be arrived from normalised cross-correlograms for receivers in a receiver array.